

1 STATE OF MINNESOTA DISTRICT COURT

2 COUNTY OF RAMSEY SECOND JUDICIAL DISTRICT

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4 The State of Minnesota,

5 by Hubert H. Humphrey, III,

6 its attorney general,

7 and

8 Blue Cross and Blue Shield

9 of Minnesota,

10 Plaintiffs,

11 vs. File No. C1-94-8565

12 Philip Morris Incorporated, R.J.

13 Reynolds Tobacco Company, Brown &

14 Williamson Tobacco Corporation,

15 B.A.T. Industries P.L.C., Lorillard

16 Tobacco Company, The American

17 Tobacco Company, Liggett Group, Inc.,

18 The Council for Tobacco Research-U.S.A.,

19 Inc., and The Tobacco Institute, Inc.,

20 Defendants.

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22

23 DEPOSITION OF R.J. REYNOLDS TOBACCO COMPANY

24 (DESIGNEE DAVID TOWNSEND)

25 Volume V, Pages 489 - 558

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1 (The following is the continued deposition
2 of R.J. REYNOLDS TOBACCO COMPANY (DESIGNEE DAVID
3 TOWNSEND), taken pursuant to Notice of Taking
4 Deposition by Rule 30.02(f), by videotape, at the
5 offices of Dorsey & Whitney, Attorneys at Law,
6 Pillsbury Center South, 220 South Sixth Street,
7 Minneapolis, Minnesota, on October 3, 1997,
8 commencing at approximately 8:14 o'clock a.m.)

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1 I N D E X

2 EXHIBITS DESCRIPTION PAGE MARKED

3 RJR 4822 "Winston 1990+", Bates

4 50755 5896-909 504

5 4823 October 20, 1988

6 correspondence, Greene to

7 DiMarco and Hildebolt,

8 Bates 51233 1597-601 548

9

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11

12 WITNESS EXAMINATION BY PAGE

13 David Townsend Mr. O'Fallon 493

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1 P R O C E E D I N G S

2 (Witness previously sworn.)

3 DAVID TOWNSEND

4 called as a witness, being previously

5 sworn, was examined and testified

6 as follows:

7 ADVERSE EXAMINATION (cont'd)

8 BY MR. O'FALLON:

9 Q. Doctor, when we left off yesterday, we were
10 talking about the various reconstituted sheets that
11 added ammonia, and I believe the last one we left off
12 with was G7-25. Do you recall that?

13 A. I recall that.

14 Q. Now G7-25 has ammonia -- gaseous ammonia added
15 to it as well as 1.5 percent DAP addition; correct?

16 A. I don't recall the exact level of DAP. I
17 believe from the -- from the schematic diagram that
18 we saw yesterday, it showed both ammonia and DAP
19 being added. I don't recall the exact level.

20 Q. I'm going to hand you a document that's been
21 previously marked in this litigation as Plaintiffs'
22 Exhibit 1153*; I believe we're going to redesignate
23 that as 1153-A. This is entitled "PROJECT
24 EXPLANATIONS" and is Bates numbered 51126 4182
25 through 4185.

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1 Have you seen this document or documents similar
2 to this previously?

3 MR. PLESEC: Object to the question.

4 A. I don't recall seeing the first two pages of
5 this document. The last two pages actually are
6 similar to documents that I've seen in the past. I
7 don't know that I've seen this one exactly, but it's
8 very similar.

9 Q. Okay. On the first page under "G7-25," it
10 indicates that that is "A G7 sheet produced with 1.5
11 percent Diammonium Phosphate (DAP) and heated extract
12 (200 Fahrenheit for 1 hour)"; correct?

13 MR. PLESEC: Objection.

14 A. That's what it says.

15 Q. And then if we actually look on page 4184, at
16 the top it says processed reconstituted sheet;
17 correct?

18 A. That's correct.

19 Q. And these basically list the various types of G7
20 and other tobaccos that are used in your production;
21 correct?

22 MR. PLESEC: Objection.

23 A. This list's a short description of a number of
24 process tobaccos, including G7.

25 Q. Okay. And "C" would indicate that that's a

1 current product; correct?

2 MR. PLESEC: Objection.

3 A. I beg your pardon. Where are you looking?

4 Q. See where it says "C/E" on the one side? See up
5 there at the top --

6 A. Oh, I see.

7 Q. -- it says "C/E," and then if you go down that
8 column, there's Cs and Es?

9 A. I -- I see. I don't -- I don't really know what
10 the "C" stands for or the "E."

11 Q. Let me show you one other document. This is
12 Plaintiffs' Exhibit 1154 -- 1154*, and that's going
13 to be renumbered as 1154-A. 1154-A is a document
14 Bates stamp numbered 51233 7856 through 7859.

15 Have you seen documents similar to this
16 previously?

17 MR. PLESEC: Objection.

18 A. Yes, I have.

19 Q. Okay. Now 1153-A is dated at the top of 4184
20 October 10th of 1991; correct?

21 A. I'm sorry, I've lost where you are.

22 Q. What's --

23 A. On which page?

24 Q. I think we're back on this document, 1153.

25 A. Okay. You're back to the first document.

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1 Okay.

2 Q. Yeah, I'm just going to set a time line for
3 these.

4 A. Okay.

5 Q. 1153-A is dated October 10th of 1991, or at
6 least it --

7 MR. PLESEC: Objection.

8 Q. -- indicates it was revised on October 10th of
9 1991; correct?

10 A. That is the date on this document.

11 Q. Plaintiffs' Exhibit 1154-A is dated on the
12 second page, Bates number 7857, April 29th of 1994;
13 correct?

14 A. That's --

15 MR. PLESEC: Objection.

16 A. -- what it says.

17 Q. And the subject of the document, Plaintiffs'
18 Exhibit 1154-A, is "Revised Item Id. Codes for
19 Processed/Reconstituted Tobaccos"; correct?

20 A. That's what it says.

21 Q. And if you look at the third page of that
22 document, Bates number 7858, you'll see a listing
23 that's somewhat similar to the listing in 1153-A;
24 correct?

25 MR. PLESEC: Objection.

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1 A. I would say the listing is similar.

2 Q. And then if you look at the bottom of 1154-A,
3 Bates number 7858, there's a note that gives some
4 definitions; correct?

5 A. That's correct.

6 Q. And C equals current, E equals experimental and
7 D equals discontinued; correct?

8 A. That's what it says.

9 Q. Let's go back to the 1991 document for a
10 second.

11 A. Okay.

12 Q. Is it your understanding of this document that
13 it lists those products, those G7 formulations, that
14 are currently being used in commercial production and
15 those that are experimental?

16 MR. PLESEC: Objection.

17 A. It would be my understanding from this document
18 with the definitions on the second document that this
19 lists both G7s that are current and experimental.

20 Q. And as of October 10th of 1991, R.J. Reynolds is
21 using numerous ammoniated G7 sheets; correct?

22 MR. PLESEC: Objection.

23 A. As of October 10th, 1991, according to this
24 document, there's a number of G7 formulations that
25 use ammonia compounds.

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- 1 Q. They would include G7-2; correct?
- 2 A. That's what it says.
- 3 Q. G7-4?
- 4 A. That's what it says.
- 5 Q. I'm going to skip the ones that on the "Where
6 Used" have "RJRTI." I understand those are
7 international formulations. Right?
- 8 A. I believe so.
- 9 MR. PLESEC: Objection.
- 10 A. I would believe so.
- 11 Q. Okay. G7-7?
- 12 A. That's what it says.
- 13 Q. And again when we look across, for instance, on
14 G7-7 --
- 15 A. Uh-huh.
- 16 Q. -- it indicates that that is currently being
17 used in regular and menthol; correct?
- 18 A. That would be my interpretation.
- 19 Q. Full-flavor cigarettes?
- 20 A. Correct.
- 21 Q. Low-tar cigarettes; correct?
- 22 A. That's what it says.
- 23 Q. And ultralow-tar cigarettes?
- 24 A. That's what it says.
- 25 Q. G7-9 is an ammoniated tobacco; correct?

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1 A. That's what it says.

2 Q. And G7-10 is a tobacco treated with the form of
3 ammonia known as DAP; correct?

4 A. That's what it says.

5 Q. Okay. Also, if we look down at some of the
6 other sheets, we see there's a G7-25 that's currently
7 experimental, which is heat-treated extract plus DAP
8 plus NH3, and DAP and NH3 are both forms of ammonia;
9 correct?

10 MR. PLESEC: Objection.

11 A. DAP and NH3 are both forms of ammonia.

12 Q. Okay. And again, if we look back, if we look on
13 Plaintiffs' Exhibit 1154-A, the sheet from 1994, we
14 see that as of 1994 there are still a number of
15 ammoniated reconstituted sheets that are being used
16 currently; correct?

17 MR. PLESEC: Objection.

18 A. I would conclude that.

19 Q. They would include G7-7; correct?

20 A. I believe so.

21 Q. G7-25 is now being used commercially; correct?

22 MR. PLESEC: Objection.

23 A. That's what this document indicates.

24 Q. G7-27 is being used commercially?

25 MR. PLESEC: Objection.

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1 A. That's what this document indicates.

2 Q. Do you know what the formulation for that is?

3 A. G7-27?

4 Q. Yeah.

5 A. I don't know the details of it.

6 Q. Do you know generally what they do to that? I

7 see there's a G7-XX, ammoniated extract. Do you know

8 what that refers to?

9 A. No, I really don't. The XX, no.

10 Q. Now if we go back to Plaintiffs' Exhibit 1153-A,

11 we also see a listing for a G7-18; correct?

12 A. There is a G7-18 listed here.

13 Q. And that indicates that that's a G7 sheet with

14 tobacco salts added; correct?

15 A. That's what it says.

16 Q. This was a product that was being looked at at

17 the time for purposes of manipulating the level of

18 nicotine in R.J. Reynolds cigarettes; correct?

19 MR. PLESEC: Objection.

20 A. I would -- I would conclude from this that these

21 were sheets that were being prepared for

22 experiment -- experimental purposes along the lines

23 of the XB project.

24 Q. And again the purpose of that project and

25 projects prior to that were to manipulate the level

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1 of nicotine in the cigarette independent of the level
2 of tar; correct?

3 MR. PLESEC: Objection.

4 A. The purpose of the XB project and its
5 predecessors, GT, XGT, for example, was to develop
6 medium-nicotine/low-tar products that are consumer
7 acceptable.

8 Q. But in order to do that, you actually had to add
9 nicotine to the sheet or to the cigarette; correct?

10 MR. PLESEC: Objection.

11 A. Well there was another path completely that we
12 discussed briefly yesterday, and that was the use of
13 high-nicotine tobaccos.

14 Q. Right, but that isn't the path that G7-18 is
15 related to; correct?

16 MR. PLESEC: Objection.

17 A. G7-18 includes additions to that sheet to try to
18 accomplish the goals of XB.

19 Q. And again, the additions to the sheet are the
20 additions of nicotine and particularly a solution
21 that would include nicotine levulinate; correct?

22 MR. PLESEC: Objection.

23 A. To the best of my recollection, G7-18 is a sheet
24 with nicotine levulinate added.

25 Q. Okay. And again the purpose of that is to

1 increase the level of nicotine in the blend;

2 correct?

3 MR. PLESEC: Objection.

4 A. I think that's a reasonable conclusion.

5 Q. If we recall that when RJR was concerned back in
6 the seventy -- in the '70s with Marlboro, it was
7 concerned specifically with the levels of free
8 nicotine in the Marlboro. Moving forward to the
9 1980s, RJR continued to be concerned about the way in
10 which Marlboro delivered additional nicotine --
11 delivered nicotine at a higher rate and quicker to
12 the smoker; correct?

13 MR. PLESEC: Objection.

14 A. I would say back in the '70s, the early '70s,
15 there was concern about the growing market share of
16 Marlboro. That led to a number of speculations.
17 Some of those speculations were about pH and the
18 degree of free nicotine in the smoke from Marlboro.

19 That -- those theories I think spun within the
20 walls of Reynolds for a number of years across a
21 number of scientists.

22 Q. And those theories were acted on because, in
23 fact, as we've now established, ammonia was added and
24 continues to be added to numerous blends at RJR;
25 correct?

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1 MR. PLESEC: Objection.

2 A. The -- I believe there's two -- two things in
3 your question. The first thing is that those
4 theories were acted on. I think there were some
5 attempts to investigate those theories. The second
6 part is that we did add ammonia to process tobaccos
7 in a number of ways, and then finally it essentially
8 had no effect on pH.

9 Q. You would agree with me that all things
10 remaining equal, the addition of a base such as
11 ammonia to the tobacco blend would increase --
12 increase the pH of that blend; correct?

13 MR. PLESEC: Objection.

14 A. As I said yesterday, I think theoretically the
15 addition of a base to -- to a tobacco rod should
16 increase the pH of the smoke.

17 Q. And increased pH should result in more free
18 nicotine in the smoke; correct?

19 MR. PLESEC: Objection.

20 A. Theoretically one would expect to -- if one
21 increases the pH, one should increase the percentage
22 of nicotine that's present in the mainstream smoke as
23 free nicotine.

24 Q. Now when we move into the 1980s and particularly
25 the late 1980s, RJR was again concerned because

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1 Marlboro was delivering higher levels of nicotine
2 into the bloodstream and delivering them more quickly
3 than RJR products; correct?

4 MR. PLESEC: Objection.

5 A. That's a quite general statement. I know that
6 there was some speculation about that.

7 MR. O'FALLON: I'm going to ask the
8 reporter to mark the next document.

9 (Plaintiffs' Exhibit 4822 was marked
10 for identification.)

11 BY MR. O'FALLON:

12 Q. Plaintiffs' Exhibit 4822 is a document Bates
13 stamp numbered 50755 5896 through 5909. Have you
14 seen this document previously?

15 A. I don't believe so.

16 Q. The title of this document is "'Winston
17 1990+'"; correct?

18 A. That's correct.

19 Q. And it's a document that was prepared for RJR
20 Tobacco; correct?

21 A. That's what it says.

22 MR. PLESEC: Objection.

23 Q. I'd like you to look at page 5899, and
24 specifically I'd like you to look down to the seventh
25 paragraph on that page where it says a particular --

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1 "A particularly disturbing" Do you see where
2 I'm at?

3 A. I see that paragraph.

4 Q. That paragraph states that "A particularly
5 disturbing difference may be something your Human
6 Smoking Behavior" told us -- "Behavior people told us
7 about last month. In laboratory tests with human
8 volunteers, smaller puffs of Marlboro delivered
9 higher levels of nicotine into the bloodstream, and
10 delivered them more quickly, than Winston"; correct?

11 MR. PLESEC: Objection.

12 A. That's what this says.

13 Q. And this was a concern to R.J. Reynolds;
14 correct?

15 MR. PLESEC: Objection.

16 A. I know that there were experiments conducted in
17 this area. I know that it raised a number of
18 questions. The degree of concern at Reynolds, I'm
19 really not sure.

20 Q. Let's go down to the last page -- or the last
21 paragraph. This document states that "A good level
22 of nicotine delivery is something few smokers
23 consciously notice. But it could be a major factor
24 in why people stay with a brand even though they
25 don't know why"; correct?

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1 MR. PLESEC: Objection.

2 A. That's what it says.

3 Q. Kind of harkens back to the theory of Dr. Teague
4 that the cigarette manufacturers downplay the role of
5 nicotine in their products; correct?

6 MR. PLESEC: Objection.

7 A. No, I think that would be speculation.

8 Q. Let's look on page 5904.

9 A. Okay.

10 Q. About the sixth section down it states "Our
11 challenge isn't more puffs per cigarette, it's more
12 pleasure per puff!" Correct?

13 MR. PLESEC: Objection.

14 A. You've read that accurately.

15 Q. If you look down about three more lines, they
16 state "Fundamentally, we're not in the cigarette
17 business at all. We're in the pleasure business";
18 correct?

19 MR. PLESEC: Objection.

20 A. That's what it says.

21 Q. And pleasure means nicotine; correct?

22 MR. PLESEC: Objection.

23 A. I think some people would interpret it that
24 way.

25 Q. In fact, what they suggest they need to do is,

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1 at the bottom of the page, quote, "What are the
2 'pleasure points' we can intensify? We believe
3 there are five. And we believe, with R+D, that if we
4 focus on them, singlemindedly, we can achieve them in
5 a relatively short time"; correct?

6 MR. PLESEC: Objection.

7 A. That's what it says.

8 Q. And number two on that list is "Heighten
9 nicotine delivery to optimal"; correct?

10 MR. PLESEC: Objection.

11 A. That's what point number two says.

12 Q. And they state, quote, "Deliver nicotine
13 'satisfaction' rapidly and at sufficiently high
14 level. If a deficiency exists in this crucial area
15 versus Marlboro and PM products, we must overcome
16 it"; correct?

17 MR. PLESEC: Objection.

18 A. That's what it says.

19 Q. Then it talks about "Possible solutions we've
20 discussed with R+D include:

21 "'Dual Delivery' via nose and mouth thanks to
22 the 'more smoke' change

23 "'Decoupling' of nicotine" and "tar, and
24 raising its level, provided we can overcome harshness
25 problem

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1 "Using techniques like organic acids or
2 ammoniation to provide our own version of the maybe
3 mythical 'magic bullet' from Philip Morris";
4 correct?

5 MR. PLESEC: Objection.

6 A. You've read that accurately.

7 Q. Now as part of the Reynolds programs that were
8 evaluating nicotine manipulation and the addition of
9 nicotine to cigarette blends, research was done that
10 in fact showed that Marlboro Lights did deliver more
11 nicotine to the smoker and faster than Marlboro --
12 than R.J. Reynolds' products; correct?

13 MR. PLESEC: Objection.

14 A. I can recall some experiments that showed that
15 Marlboro delivered more nicotine to the smoker as
16 measured by serum nicotine levels. The notion that
17 it was delivered faster we discussed a bit yesterday,
18 and I don't agree with that.

19 Q. Well let's look at the document itself.

20 A. Sure.

21 Q. I'm going to hand you Plaintiffs' Exhibit 4816.
22 On the front page this document is entitled --

23 MR. PLESEC: Could you wait one second,
24 Counsel. 4816 you said?

25 MR. O'FALLON: Yes.

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1 Q. This document states on the front page "Review
2 the use of organic" salts "and nicotine salts in
3 tobacco burning cigarettes, and recent attempts to
4 develop an ultra-low 'tar' cigarette with enhanced
5 nicotine yield"; correct?

6 MR. PLESEC: Objection.

7 A. No, you didn't read that correctly. You said
8 "organic salts"; it says "organic acids."

9 Q. Oh, it's "organic acids." You're right. I'll
10 read it again.

11 It states on the front that this is, quote,
12 "Review the use of organic acids and nicotine salts
13 in tobacco burning cigarettes, and recent attempts to
14 develop an ultra-low 'tar' cigarette with enhanced
15 nicotine yield"; correct?

16 MR. PLESEC: Objection.

17 A. You read it correctly.

18 Q. And what's documented in this document is really
19 the history to this point of the various nicotine
20 manipulation programs started in the late '80s by
21 Philip -- by R.J. Reynolds; correct?

22 MR. PLESEC: Objection.

23 A. It appears to me to be a history of several
24 product development projects.

25 Q. Which deal with in large part the addition of

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1 nicotine to cigarette blends?

2 MR. PLESEC: Objection.

3 A. I believe this document deals with product
4 development projects that deal with attempts to make
5 medium-nicotine/low-tar products in a general sense.

6 Q. And in specific, it deals with attempts to make
7 those products by the addition of nicotine
8 levulinate; correct?

9 MR. PLESEC: Objection.

10 A. As we discussed yesterday, that was one
11 pathway. That was not the only pathway.

12 Q. Let's look on page 5927. The last bullet point
13 on that page indicates that Project GT begins in
14 brand R&D in 1987; correct?

15 MR. PLESEC: Objection.

16 A. It says "Project GT begins in Brand R&D." It
17 doesn't say in 1987.

18 Q. Well you see it's under 1987.

19 A. Well, I mean, it's a separate bullet. I
20 don't -- I don't know that it's referring exactly to
21 the same year.

22 Q. Well didn't we --

23 A. I just don't know.

24 Q. -- see documents yesterday that indicated that
25 Project GT started in 1987?

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1 MR. PLESEC: Objection.

2 A. It's about the right -- right time frame. I'm
3 just trying to be precise here.

4 Q. Let's look on the next page. The second bullet
5 point talks about "In an attempt to improve 'impact'
6 and tobacco taste, Project GT explored the addition
7 of Nicotine Levulinate (salt form) to 2 ultralow-tar
8 cigarettes, NOW and WINSTON ULTRA LIGHT 100s";
9 correct?

10 MR. PLESEC: Objection.

11 A. That's what it says.

12 Q. So again this is detailing the addition of
13 nicotine salt to a blend; right?

14 MR. PLESEC: Objection.

15 A. I believe so.

16 Q. At the bottom of the page it makes the
17 observation that binding -- concerning binding
18 studies; correct?

19 A. There's a statement here that starts out
20 "Binding studies."

21 Q. It states "Within a narrow concentration range,
22 addition of nicotine levulinate seems to enhance the
23 binding of nicotine to receptors"; correct?

24 MR. PLESEC: Objection.

25 A. That's what it says.

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1 Q. That would be referring to the nicotinic
2 receptors in the brain; correct?

3 MR. PLESEC: Objection.

4 A. I don't know the details of this statement or
5 what's behind it. That's really outside my area.

6 Q. Is that generally your understanding?

7 MR. PLESEC: Objection.

8 A. Generally I understand that nicotine interacts
9 with certain receptors in the brain. I don't
10 understand binding studies, however.

11 Q. So apparently the addition of nicotine
12 levulinate increases the pharmacological effect of
13 nicotine in the brain; correct?

14 MR. PLESEC: Objection.

15 A. Well I don't know that I can jump to that
16 conclusion. I just don't know. I don't understand
17 what binding studies are.

18 Q. And in fact, one of the things that you tested
19 in doing this project were the nicotine plasma rise
20 effected by the cigarettes with the added nicotine;
21 correct?

22 MR. PLESEC: Objection.

23 A. I'm aware of some experiments along those
24 lines.

25 Q. One of those experiments is detailed on page

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1 last four Bates number 5930; correct?

2 MR. PLESEC: Objection.

3 A. That would be my interpretation from this
4 document.

5 Q. And it appears that with some of the cigarettes
6 you're actually getting more nicotine into the
7 bloodstream; correct?

8 MR. PLESEC: Objection.

9 A. I think the graph on this page of the document
10 shows higher levels of plasma nicotine for some
11 cigarettes compared to others.

12 Q. Now let's look on page 5933.

13 A. Okay.

14 Q. 5933 is a graph that actually compares two of
15 your experimental products with an existing Marlboro
16 Light; correct?

17 MR. PLESEC: Objection.

18 A. That would be my interpretation of this graph.

19 Q. And one of the findings from this graph would be
20 that Marlboro Light delivers higher levels of
21 nicotine into the bloodstream of the smoker; correct?

22 MR. PLESEC: Objection.

23 A. That would be my interpretation of this graph.

24 Q. It also delivers those higher levels quicker
25 than do the experimental R.J. Reynolds cigarettes;

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1 correct?

2 MR. PLESEC: Objection.

3 A. As we discussed briefly yesterday, I don't think
4 this curve suggests quicker delivery. I think it --
5 it suggests higher delivery to the -- to the plasma.

6 Q. Well if we look at approximately three minutes,
7 we see that with the R.J. Reynolds experimental
8 cigarette you have approximately 12 NGs per
9 milliliter -- or actually probably closer to 11 NGs
10 per milliliter of nicotine in the bloodstream;
11 correct?

12 A. That's approximate.

13 Q. At that same time period, two and a half minutes
14 into the smoking experiment, the Marlboro Light has
15 delivered approximately 15; correct?

16 A. That's approximate, and I think it is consistent
17 with the notion that there's more delivered.

18 Q. More delivery in a quicker fashion?

19 A. No, I don't agree with in a quicker fashion.

20 The shape of these curves for the Marlboro or either
21 of the XGT prototypes is very similar. Scientists
22 would look at that and conclude that the level is
23 higher, but the rate of increase and the shape of the
24 curve is really quite similar, so I don't think a
25 scientist would conclude that the -- that the rate of

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1 transfer to plasma is -- is different based on this
2 experiment.

3 Q. Well it appears that some scientists told
4 somebody who wrote the report that we've now had
5 marked as 4822 that "In laboratory tests with human
6 volunteers, smaller puffs of Marlboro delivered" --

7 A. Excuse me, I'm not with you. 4822?

8 Q. Right, we've --

9 A. What page?

10 Q. It's what we've already read previously, 5899.

11 A. 5899. Okay, now I'm with you.

12 Q. Again to read this again --

13 MR. PLESEC: What -- what paragraph are you
14 reading, Counsel?

15 MR. O'FALLON: The one I've read
16 previously, sir.

17 Q. It says "A particularly disturbing difference
18 may be something your Human Smoking Behavior people
19 told" -- "told us about last month. In laboratory
20 tests with human volunteers, smaller puffs of
21 Marlboro delivered higher levels of nicotine into" --
22 "into the bloodstream, and delivered them more
23 quickly, than Winston"; correct?

24 MR. PLESEC: Objection.

25 A. That's what this says. I don't agree with -- I

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1 mean, I -- I do agree from this one graph that we
2 looked at that Marlboro in that experiment delivers
3 higher levels of nicotine to the bloodstream. I
4 don't agree that these data show that it delivers
5 them more quickly than Winston. First of all, this
6 is not a comparison of Winston or Marlboro in the
7 graph.

8 Q. But it supports that general statement, does it
9 not?

10 MR. PLESEC: Objection.

11 A. What, the graph that we looked at?

12 Q. Yes.

13 A. The graph that we looked at supports the general
14 statement that Marlboro delivers higher levels of
15 nicotine compared to those two XGT prototypes. It
16 does not, however, I believe support the statement
17 that Marlboro delivers nicotine to the plasma more
18 quickly.

19 Q. Now at some point the documents indicate that
20 your XGT and GTX project was moved to the flavor
21 division; correct?

22 MR. PLESEC: Objection.

23 A. We discussed this a bit yesterday, and I said
24 I -- I would be surprised -- I indicated something
25 like I would be surprised if that's the case because

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1 my understanding was that GT and XGT were always
2 product development projects. It may have at some
3 point focused on flavor division work, but I don't
4 believe that that project was transferred to the
5 flavor division per se.

6 Q. But the document that you're now looking at on
7 page 5931 --

8 MR. PLESEC: What document are you talking
9 about, Counsel? The document --

10 MR. O'FALLON: I'm talking about the
11 document that Dr. Townsend has in front of him,
12 Plaintiffs' Exhibit 4816, Counsel.

13 MR. PLESEC: And what page?

14 Q. It states on page 5931 that "Projects XGT and
15 GTX shifted to Flavor Division"; correct?

16 MR. PLESEC: Objection.

17 A. That's what that line says. Again I'm -- I'm
18 not aware that those projects were ever shifted to
19 the flavor division. I believe they continued as
20 product development projects.

21 Q. Well either you or the person who wrote the
22 document that's in front of you are wrong; correct?

23 MR. PLESEC: Objection.

24 A. I think there's an inconsistency between what
25 I've said and at least our interp -- your

1 interpretation from what's said in this document.

2 Q. Well the statement in this document's fairly
3 point blank, isn't it, sir?

4 MR. PLESEC: Objection.

5 Q. There's really not a lot of ambiguity --

6 A. The state --

7 Q. -- in that statement?

8 A. The statement in this --

9 MR. PLESEC: Objection.

10 A. -- document is succinct and clear. I don't
11 agree with what this document says. My experience or
12 my recollection is that XGT and GTX were consistently
13 product development pro -- projects. I do believe
14 that we hit consumer acceptance problems in both of
15 those projects. I do believe that there was a lot of
16 flavor division research that was conducted to try to
17 improve the acceptance of those products, but I
18 really am skeptical that the projects per se were
19 transferred to the ownership of the flavor division.

20 Q. So in answer to my question, you think this is
21 wrong?

22 MR. PLESEC: Objection.

23 A. Well I think I've explained what I think about
24 this statement.

25 Q. Now at some point another project took the place

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1 of XGT or GTX, wherever it went to, and that's
2 Project XB; correct?

3 MR. PLESEC: Objection.

4 A. XB had similar objectives that occurred at a
5 later time.

6 Q. And those similar objectives were adding
7 nicotine to standard products; correct?

8 MR. PLESEC: Objection.

9 A. The objective of XB was to develop
10 medium-nicotine/low-tar products. Adding nicotine
11 was only one pathway.

12 Q. And it's a pathway that a great deal of time was
13 spent on; correct?

14 MR. PLESEC: Objection.

15 A. My opinion, there was a fair amount of time and
16 effort spent on that pathway.

17 Q. I'm going to hand you a document that we've
18 previously marked as Plaintiffs' Exhibit 4819.

19 A. Okay.

20 Q. Have you seen this document previously?

21 A. I saw it yesterday.

22 Q. This is a document entitled "PROJECT XB, STATE
23 OF THE PROJECT"; correct?

24 A. That's the title of this document.

25 Q. Under project stewardship it states that

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1 high-nicotine tobacco axtracts are cleared for use up
2 to 3 percent of blend nicotine; right?

3 A. I believe you read that correctly --

4 MR. PLESEC: Objection.

5 A. -- except it's "extracts," not "axtracts."

6 Sorry.

7 Q. These tobacco extracts are extracts taken from
8 other RJR processes such as the denicotinization
9 process known as the KDN process; correct?

10 MR. PLESEC: Objection.

11 A. I believe that the extracts that have been --
12 that were evaluated for XB were KDN extracts.

13 Q. And the way that you form nicotine levulinate in
14 the KDN extracts is by adding levulinic acid to that
15 extract; correct?

16 MR. PLESEC: Objection.

17 A. I think that's one way that was evaluated.

18 Q. And that was one of the ways that was tested;
19 correct?

20 MR. PLESEC: Objection.

21 A. KDN extract with added levulinic acid was
22 evaluated in product development efforts.

23 Q. Specifically it was evaluated in Project XB;
24 correct?

25 MR. PLESEC: Objection.

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1 A. That's correct.

2 Q. Let's look on the next page. This is the human
3 smoking behavior section; correct?

4 A. That's the title at the top.

5 Q. It states that "1 to 2 milligram prototypes
6 achieve lower blood nicotine levels than 5 milligram
7 products but more than conventional 1 to 2 milligram
8 products"; correct?

9 MR. PLESEC: Objection.

10 A. That's what it says.

11 Q. So in other words, the addition of this
12 additional nicotine extract to these very
13 ultralow-tar products is giving more blood nicotine
14 than similar products but not quite as much as the
15 5-milligram products; correct?

16 MR. PLESEC: Objection.

17 A. I believe you're essentially correct. I believe
18 that comparing the 1- to 2-milligram prototypes, one
19 received higher blood nicotine levels than other 1-
20 to 2-milligram products that hadn't been similarly
21 constructed.

22 Q. And the 5-milligram prototype, that's referring
23 to a 5-milligram-of-nicotine cigarette; correct?

24 MR. PLESEC: Objection.

25 A. I believe that the -- my interpretation is that

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1 the 5-milligram products that are spoken to here are
2 conventional 5-milligram-tar products.

3 Q. Okay. Are those considered ultralow-tar
4 products?

5 A. They are in the ultralow-tar category.

6 Q. Okay. It indicates here that "Numerous 5
7 milligram prototypes have matched blood" -- "blood
8 nicotine levels and human smoking behavior" for
9 "full-flavor/low-tar smokers"; correct?

10 MR. PLESEC: Objection.

11 A. That's what it says.

12 Q. In other words, you've been able to adjust an
13 ultralow-tar product by the addition of nicotine
14 levulinate so it delivers the nicotine and smoke
15 similarly to a higher-nicotine product; that is, the
16 full-flavor/low-tar product; correct?

17 MR. PLESEC: Objection.

18 A. I would interpret this statement as there are XB
19 5-milligram prototypes developed that have matched
20 blood nicotine levels compared to a commercial FFLT
21 product.

22 Q. And they've achieved that through the addition
23 of nicotine levulinate via an extract; correct?

24 MR. PLESEC: Objection.

25 A. Well again that was only one path of developing

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1 XB products. It's not clear that that is the path
2 that was evaluated here, that that was only one
3 path.

4 Q. Well what this particular document is talking
5 about is high-nicotine tobacco extracts and levu --
6 and levulinic acid; correct?

7 MR. PLESEC: Objection.

8 A. I believe that's the overall discussion on the
9 first page. All I'm saying is that the addition of
10 nicotine levulinate was one path. These may be those
11 products. I don't know that for sure.

12 Q. Well do you see anywhere in this particular
13 document where it talks about simply adding
14 high-nicotine tobacco?

15 MR. PLESEC: Objection.

16 A. The use of high-nicotine tobacco was certainly
17 the other major pathway.

18 Q. But it's not discussed in this document, is it?

19 A. Well skimming through it, I don't see it
20 discussed in this document, no.

21 Q. And again this is the state of the project at
22 this point in time, which is listed on the first page
23 of this document as being -- it appears to be 8 or
24 perhaps 6/17 of 1992; correct?

25 MR. PLESEC: Objection.

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1 A. It appears to be. All I'm doing is trying to be
2 complete in that there were more than one pathway.
3 This document may speak to only one of those
4 pathways, which is the addition of nicotine
5 levulinate.

6 Q. Well usually when you have a document that's
7 called the state of the project, you would expect
8 that document to discuss all aspects of the project
9 if it's going to give people the state of the
10 project; correct?

11 MR. PLESEC: Objection.

12 A. It may be that this is the state of the project
13 over one portion of the time of XB. I do know that
14 XB looked at other pathways, though. This may have
15 been the focus at that time period.

16 Q. Let's look at --

17 A. I'm just speculating.

18 Q. So you're guessing?

19 A. What?

20 Q. You said you're speculating. Does that mean
21 you're guessing?

22 A. I'm just trying to make it clear that XB
23 included more than one pathway, which is the one
24 we've been -- other than the one we've been
25 discussing. This may be the state of the project

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1 over one time period where the work focused on only
2 one of those two major pathways.

3 Q. Now if --

4 A. But I'm guessing as to that.

5 Q. Now if you look back at page 1041 --

6 A. Okay.

7 Q. -- the fourth bullet states that "Nicotine
8 uptake levels for smokers of full-flavor,
9 full-flavor/low-tar, and 5 milligram ultralow-tar
10 products are the same at 15 ng per milliliter rise";
11 correct?

12 MR. PLESEC: Objection.

13 A. That's what it says.

14 Q. So apparently testing has been done on numerous
15 types of cigarettes and basically smokers have all
16 smoked to the same nicotine level; correct?

17 MR. PLESEC: Objection.

18 A. I don't know the details behind this statement.
19 What it says is smoke -- in my interpretation, is
20 that smokers of products in the three different
21 categories receive 15 nanograms per milliliter rise.
22 I don't understand the term "rise."

23 Q. But this would be consistent with what
24 Dr. Teague said some 20 years earlier, which is that
25 smokers smoke for a dosage of nicotine; correct?

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1 MR. PLESEC: Objection.

2 A. I don't know how to interpret this with respect
3 to Teague's opinion.

4 Q. The fact that smokers smoke for a certain dosage
5 of nicotine is a concept known as smokers'
6 compensation; correct?

7 MR. PLESEC: Objection.

8 A. I think in a general sense compensation, to me,
9 means altering one's smoking behavior for whatever
10 reason. I don't believe that cig -- that cigarette
11 smokers smoke to a certain level of nicotine.

12 Q. I'd like you to take a look at a document we've
13 previously marked as Plaintiffs' Exhibit 1111.

14 A. Okay.

15 Q. Plaintiffs' Exhibit 1111 is a document Bates
16 stamp numbered 50897 8013 through 8025, and it's sent
17 to numerous people in numerous departments at R.J.
18 Reynolds, the so-called Product Differentiation
19 Group; correct?

20 MR. PLESEC: Objection.

21 A. That's what it says.

22 Q. If you'll look at the second page, Bates number
23 8014, the document is entitled "THE OVER-SMOKING
24 ISSUE"; correct?

25 A. That's the title of it.

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1 Q. It says, quote, "It has been argued for several
2 years that low tar and ultra-low tar cigarettes are
3 not really what they are claimed to be"; correct?

4 MR. PLESEC: Objection.

5 A. You read that accurately.

6 Q. "Numerous investigators from the United States,
7 Canada and the United Kingdom have studied the way in
8 which smokers smoke full flavor ... full flavor low
9 tar ... and ultra-low tar ... cigarettes and have
10 concluded that:

11 "1. Each individual smoker has his or her own
12 nicotine requirement from each cigarette"; correct?

13 MR. PLESEC: Objection.

14 A. That's what it says.

15 Q. So in this time period, which is sometime in the
16 1980s, numerous investigators from the United States,
17 Canada and the United Kingdom have confirmed what
18 Dr. Teague said back in 1972; correct?

19 MR. PLESEC: Objection.

20 A. I believe this must be a literature survey of
21 researchers in those three countries. I don't -- I
22 don't know that it exactly confirms what Teague
23 suggested.

24 Q. It comes pretty close, doesn't it?

25 MR. PLESEC: Objection.

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1 A. Well I'd just have to speculate.

2 Q. It would be a reasonable interpretation of this
3 document and the Teague document taken together that
4 they both state the notion that each individual
5 smoker has his or her own nicotine requirement from
6 each cigarette; correct?

7 MR. PLESEC: Objection.

8 A. I mean, the statement is what it is. I don't --
9 I don't agree with it based on what I've seen in the
10 infor -- in the literature.

11 Q. Number two says that "Virtually all cigarettes
12 can be made to yield the desired" amount "of nicotine
13 depending on the size of the puff taken and the
14 extent to which the puff is inhaled," parenthetical,
15 "(This is referred to by some as the smoking
16 maneuver)"; correct?

17 MR. PLESEC: Objection.

18 A. That's what it says.

19 Q. It then says that "The amount of tar yielded by
20 a full-flavor, full-flavor/low-tar or ...
21 ultralow-tar cigarette (per milligram of nicotine) is
22 not appreciably affected by the smoking maneuver";
23 correct?

24 MR. PLESEC: Objection.

25 A. That's what it says.

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1 Q. "In other words, for a cigarette that yields one
2 milligram of nicotine and 14 milligrams of tar under
3 FTC smoking conditions the tar to nicotine ratio
4 (T/N) is 14 and this ratio remains relatively
5 constant no matter how the smoking maneuver differs
6 from" the "FTC" condition; correct?

7 MR. PLESEC: Objection.

8 A. That's what it says.

9 Q. "For this cigarette, the smoker will receive 14
10 times as much tar as he does nicotine no matter how
11 he smokes it"; correct?

12 MR. PLESEC: Objection.

13 A. That's what it says.

14 Q. In other words, what this says is what the
15 smoker should look at is the tar-to-nicotine ratio,
16 not the absolute numbers of tar and nicotine;
17 correct?

18 MR. PLESEC: Objection.

19 A. No, I wouldn't agree with that, and I don't
20 agree with the statement that the ratio is constant.
21 It does change to a degree, albeit a relatively small
22 degree, as one alters puffing conditions.

23 Q. But what this means is that if you smoke a
24 low-tar cigarette and you smoke that low-tar
25 cigarette for 1 milligram of nicotine and if you

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1 smoke a high-tar cigarette and you smoke that
2 high-tar cigarette for 1 milligram of nicotine,
3 you're going to get the same amount of tar from both
4 cigarettes; correct?

5 MR. PLESEC: Objection.

6 A. Superficially that's correct if you assume that
7 people smoke for a certain constant level of
8 nicotine. I don't believe that that's the case.

9 Q. Well this document would disagree with you;
10 correct?

11 MR. PLESEC: Objection.

12 A. Statements in this document as a survey from
13 some literature -- I don't know from what -- tend to
14 disagree with what I just said.

15 Q. And as we've also discussed in the past two
16 days, a Dr. Byrd from R.J. Reynolds has recently
17 completed a study with 100 smokers that shows almost
18 100 percent compensation; correct?

19 A. A study was conducted by Dr. Byrd with a hundred
20 smokers that showed almost complete compensation.
21 Dr. Byrd also conducted previously another study with
22 33 smokers that showed almost no compensation.

23 Drs. Pritchard and Robinson surveyed the
24 literature and -- and published a survey of that
25 literature in the peer reviewed journal suggesting

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1 that the bulk of the literature suggests that
2 compensation is not zero and it's not a hundred, but
3 somewhere in the middle.

4 Q. So the FTC numbers as stated in various
5 advertisements by -- by RJR are in some cases totally
6 misleading and in other cases just somewhat
7 misleading?

8 MR. PLESEC: Objection.

9 A. I don't believe that the FTC numbers are
10 misleading. They provide a comparative basis for --
11 for smokers to make choices in the marketplace, and
12 it is in fact the intention of the FTC to do only
13 that.

14 Q. But the fact of the matter is, is R.J. Reynolds
15 has used those numbers to suggest to smokers that if
16 they smoke R.J. Reynolds', quote, "low-tar products,"
17 end quote, they will in fact get less tar, and that's
18 a misleading statement depending on how that smoker
19 smokes a cigarette; correct?

20 MR. PLESEC: Objection.

21 A. I don't believe that that's a misleading
22 statement at all. I believe that smokers who smoke
23 lower-tar cigarettes overall will get less. They
24 won't get proportionately less than -- than you might
25 expect based on the FTC numbers, but they will get

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1 less.

2 Q. Maybe. Your own documents and your own research
3 shows that they may get exactly the same amount as
4 they would from full-tar cigarettes if they 100
5 percent compensate; correct?

6 MR. PLESEC: Objection.

7 A. If you look at individual smokers, you can have
8 a wide variability in smoking behavior and
9 consequently yield to the smoker. It's entirely
10 possible for a smoker to smoke a cigarette in a
11 manner as to get the same tar and the same nicotine
12 level as they might from a higher-tar product, smoke
13 differently; however, overall I think there's
14 evidence that smokers as a group who smoke lower-tar
15 products get less.

16 Q. Well when --

17 When Dr. Robinson and Pritchard did their study,
18 I believe you've testified that they looked at eight
19 pieces of literature; correct?

20 A. I believe they -- they looked at eight studies
21 in the literature and combined those studies to see
22 what overall those eight studies would suggest about
23 the degree of compensation.

24 Q. You would agree with me that there are many more
25 than eight studies on smokers' compensation in the

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1 literature; correct?

2 MR. PLESEC: Objection.

3 A. I believe that there are more than eight studies
4 in the literature.

5 Q. Apparently whoever wrote this document,
6 Plaintiffs' Exhibit 1111, reviewed a great deal of
7 literature, at least they state "numerous
8 investigators from the United States, Canada and the
9 United Kingdom," and came to a far different
10 conclusion than apparently Drs. Robinson and
11 Pritchard came to; correct?

12 MR. PLESEC: Objection.

13 A. The statements in this appear to have come from
14 a literature review. I do know that Drs. Robinson
15 and Pritchard in reviewing the literature were very
16 careful in evaluating the various studies to ensure
17 that the studies that were included in their -- their
18 review were scientifically valid.

19 Q. Move to strike as nonresponsive.

20 The author of the document, Plaintiffs'
21 Exhibit 1111, analyzed literature that reached a
22 contrary conclusion to the conclusion reached by
23 Drs. Robinson and Pritchard; correct?

24 A. I don't know that the author of the document in
25 fact reached these conclusions or that the author of

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1 this document was in fact just simply restating
2 conclusions from researchers that were published. I
3 do believe that the statements in this document are
4 contrary to what Drs. Robinson and Pritchard
5 published in a peer reviewed journal.

6 Q. Now you understand that RJR has in the past
7 suggested to smokers that they should continue to
8 smoke, but they should simply, if they're concerned
9 about health, smoke RJR low-tar products; correct?

10 A. I'm not sure what --

11 MR. PLESEC: Objection.

12 A. -- you're referring to.

13 Q. Do you think it's inappropriate for a company
14 that sells cigarettes to suggest to somebody who
15 wants to quit that they should, instead of quitting,
16 smoke their lower-tar product?

17 MR. PLESEC: Objection.

18 A. This is hypothetical. I can't -- I can't recall
19 seeing that kind of in -- that kind of suggestion,
20 that if you want to quit, continue smoking, but smoke
21 a lower-tar product. I don't recall seeing anything
22 of that sort.

23 Q. You would agree that if a company knows that
24 smokers compensate and that in fact they may receive
25 100 percent of the amount of tar with a low-tar

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1 cigarette that they would with a high-tar cigarette,
2 that it would be misleading to suggest to smokers
3 that somehow they will receive less tar from a
4 low-tar cigarette; correct?

5 MR. PLESEC: Objection.

6 A. If smokers -- if all smokers compensated to 100
7 percent and received the same nicotine and same tar
8 levels, then the FTC tar level measurement and
9 protocol would not be useful for smokers to make
10 choices in the marketplace. I don't believe that
11 cigarette smokers as a group compensate fully to
12 achieve a certain nicotine level.

13 Q. RJR has never stated in its advertisements or
14 made public statements to the effect that the FTC
15 measurements are meaningless to any individual
16 smoker, have they?

17 MR. PLESEC: Objection.

18 A. I don't recall such a statement and I don't
19 believe that the FTC tar measurements or nicotine
20 measurements are meaningless, and the FTC doesn't
21 believe that they're meaningless either.

22 Q. I'd like you to look at what's been previously
23 marked as Plaintiffs' Exhibit 1108. Plaintiffs'
24 Exhibit 1108 is a document Bates stamp numbered 50071
25 3769.

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1 This is a Vantage ad; correct?

2 MR. PLESEC: Objection.

3 A. Certainly appears to be.

4 Q. And the top, it states "How many times have you
5 decided to give up smoking?" Correct?

6 A. That's the title of this document.

7 Q. In the third paragraph it says "If you're like a
8 lot of smokers these days, it probably isn't smoking
9 that you want to give up. It's some of that 'tar'
10 and nicotine you've been hearing about"; correct?

11 A. That's what it says.

12 Q. "So you tried cigarettes which were" lower "in
13 'tar' and you found yourself checking every once in
14 a while to see if they were still lit. Which drove
15 you right back to your regular brand"; correct?

16 A. That's what it says.

17 Q. "Now, there is Vantage"; correct?

18 A. That's what it says.

19 Q. "Vantage cigarettes, either filter or menthol,
20 deliver considerably less 'tar' and less nicotine
21 than most cigarettes"; correct?

22 A. That's what it says.

23 Q. Now if a smoker compensates, that's simply not
24 true; correct?

25 MR. PLESEC: Objection.

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1 A. An individual smoker can change their puff
2 behavior -- puffing behavior and get more or less,
3 could even get more or could even get the same as --
4 as a higher-tar product. But again, overall I think
5 smokers as a group will get less if they smoke a
6 lower-tar product as measured by the FTC.

7 Q. But you never tell the smoker here that, "The
8 FTC numbers are meaningless to what you will
9 receive." You're suggesting specifically to the
10 smoker that, "If you smoke our product, you're going
11 to get less tar"; correct?

12 MR. PLESEC: Objection.

13 A. We never specifically, to my -- to my knowledge,
14 have ever told consumers that the FTC tar numbers are
15 meaningless because that's not true. Even the FTC
16 doesn't agree that they're meaningless.

17 Q. The fact of the matter is, sir, you are
18 suggesting point blank to consumers of your products
19 that if they smoke Vantage they're going to get less
20 tar when in fact you knew inside the walls of R.J.
21 Reynolds that for many smokers that was absolutely
22 false?

23 MR. PLESEC: Objection.

24 A. I don't agree with that at all.

25 Q. You also suggested that these lower-tar

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1 cigarettes are basically healthier; correct?

2 MR. PLESEC: Objection.

3 A. I don't believe that's true either.

4 Q. Let's look at Plaintiffs' Exhibit 1109. Again

5 this is another Vantage ad; correct?

6 MR. PLESEC: Objection.

7 A. It appears to be.

8 Q. It's Bates numbered 50071 3420; correct?

9 A. That's correct.

10 Q. And it again asks the same question, "Are you

11 still smoking?" Correct?

12 A. Well that's not exactly the same question, but

13 that is what it says at the top.

14 Q. Well it's the same implication, isn't it?

15 MR. PLESEC: Objection.

16 A. I think it's a related question.

17 Q. And it's really talking about the health

18 concerns of smoking wherein it says "In the years

19 since the criticism against smoking first appeared,

20 many people have given up cigarettes"; correct?

21 MR. PLESEC: Objection.

22 A. That's what it says.

23 Q. Now the criticism is that, for instance, smoking

24 causes cancer, emphysema, heart disease and numerous

25 other fatal illnesses; correct?

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1 MR. PLESEC: Objection.

2 A. There are a number of criticisms against
3 smoking, including that -- the suggestion that
4 cigarette smoking causes the diseases such as you
5 suggested. It's clear that cigarette smoking is a
6 significant risk for those diseases.

7 Q. And R.J. Reynolds is going to take advantage of
8 those risks in order to try to peddle its low-tar
9 cigarette here; correct?

10 MR. PLESEC: Objection.

11 A. I don't agree with that notion at all. R.J.
12 Reynolds has responded to the criticisms against
13 smoking by developing lower-tar products. Many
14 people in the scientific community and even -- even
15 the Surgeon General has suggested that is a
16 reasonable direction to go.

17 Q. The fact of the matter is, sir, given the fact
18 that there is smoking compensation, your lower-tar
19 products don't in fact deliver lower tar if a
20 consumer compensates 100 percent; correct?

21 MR. PLESEC: Objection.

22 A. If an individual consumer compensates 100
23 percent, they may well or should get tar and nicotine
24 levels comparable to a higher-tar product. I don't
25 believe that that's the case for smokers as a group,

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1 however.

2 Q. Again talking about RJR taking advantage of
3 these health concerns, in paragraph three it says "If
4 you're still a smoker, you've probably heard the
5 charges leveled against 'tar' and nicotine";
6 correct?

7 MR. PLESEC: Objection.

8 A. That's what it says.

9 Q. "You may have become concerned"; correct?

10 A. That's what it says.

11 Q. "And chances are you even tried to do something
12 about it"; correct?

13 A. That's what it says.

14 Q. "Like trying several of those empty-tasting low
15 'tar' and nicotine cigarettes"; correct?

16 A. That's what it says.

17 Q. It then says "If you're like a lot of other
18 smokers, you probably went right back to your old
19 brand, and concluded that a good-tasting low 'tar'
20 and nicotine cigarette has never been invented";
21 correct?

22 A. That's what it says.

23 Q. Then it says "Well, if that's the case, you
24 haven't tried Vantage"; correct?

25 A. You've read that correctly.

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1 Q. And again, R.J. Reynolds states to the smoking
2 public, quote, "Vantage cuts down substantially on
3 the 'tar' and nicotine you may have become concerned
4 about"; correct?

5 A. That's what it says.

6 Q. So basically what you're telling the smoker is,
7 "If you smoke this product, it will be better for
8 you"; correct?

9 MR. PLESEC: Objection.

10 A. I mean, I take this ad for -- for what it says
11 to me, and that is that cigarette smoking has a
12 number of criticisms, i.e., health risks; that many
13 people have tried to quit as a result of these
14 criticisms; that they've found many low-tar products
15 unacceptable; and this suggests that Vantage may be a
16 better-tasting low-tar product; that moving to
17 lower-tar products is a reasonable thing to do; and
18 if you smoke Vantage you will probably, I think it
19 implies, get lower tar.

20 Q. Now RJR made all these representations to take
21 advantage of the fact that it was becoming widely
22 known that cigarette smoking caused cancer knowing
23 full well that many smokers compensate to receive a
24 single dose of nicotine and thereby receive the same
25 amount of tar from whatever cigarette they smoke;

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1 correct?

2 MR. PLESEC: Objection.

3 A. I don't agree with that. Again I think
4 compensation does occur for many smokers. I don't
5 believe that full compensation or a hundred percent
6 compensation is what smokers as a group do.

7 Q. And in fact, R.J. Reynolds never tested the
8 smoke from Vantage to see if it reduced the
9 biological activity of that smoke; correct?

10 MR. PLESEC: Objection.

11 A. For tar reduction, the -- the direction for
12 tar -- tar reduction is to reduce overall smoke
13 exposure to the consumer. That's been successful in
14 the marketplace, and some smokers may compensate, but
15 I don't believe full compensation or a hundred -- a
16 hundred percent compensation is what smokers as a
17 group do.

18 Q. Move to strike as nonresponsive.

19 And in fact, R.J. Reynolds never tested the
20 smoke from Vantage to see if it reduced the
21 biological activity of that smoke; correct?

22 MR. PLESEC: Objection.

23 A. I don't know what biological tests specifically
24 have been done on the Vantage product that's
25 commercial.

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1 Q. To the best of your knowledge, R.J. Reynolds
2 never tested the smoke from Vantage to determine
3 whether or not it reduced biological activity;
4 correct?

5 A. I don't know one way or the other.

6 Q. And the real irony is that while R.J. Reynolds
7 is willing to take out an ad that attempts to sell a
8 cigarette due to the health concerns, RJR itself to
9 this very date will not admit that cigarette smoking
10 causes any disease; correct?

11 MR. PLESEC: Objection.

12 A. As we've talked about before, cigarette smoking
13 is certainly a significant risk for a number of
14 chronic diseases. Scientific evidence is not there
15 that clearly demonstrates that cigarette smoking in
16 fact causes those diseases because those dis -- those
17 chronic diseases are multifactorial diseases, which
18 includes not only cigarette smoking, but diet,
19 exercise and other life-style factors.

20 Q. And as you sit here today, sir, as a
21 representative of R.J. Reynolds Tobacco Company, you
22 will not testify that cigarette smoking more likely
23 than not causes any disease; correct?

24 MR. PLESEC: Objection.

25 A. I don't know whether cigarette smoking causes

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1 any diseases. It may. But I simply don't know as a
2 scientist.

3 Q. And as you sit here today as a representative of
4 R.J. Reynolds, you won't admit that smoking has even
5 caused one death; correct?

6 MR. PLESEC: Objection.

7 A. I don't know whether cigarette smoking has
8 caused one death. It may have. I simply don't
9 know.

10 Q. And you also know that the medical community
11 attributes over 400,000 deaths a year to smoking;
12 correct?

13 MR. PLESEC: Objection.

14 A. I've heard numbers similar to that.

15 Q. So the medical community believes that cigarette
16 smoking causes over 400,000 deaths a year and the
17 cigarette company will not admit that cigarette
18 smoking causes or has ever caused even 1 death;
19 correct?

20 MR. PLESEC: Objection.

21 A. What I've said is I don't know whether cigarette
22 smoking has in itself caused one death. I just
23 simply don't know. It may have. I don't know.

24 Q. Now the documents we've looked at for the past
25 couple of hours emphasize the crucial role of

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1 nicotine and RJR's attempts to control and manipulate
2 that nicotine in their products; correct?

3 MR. PLESEC: Objection.

4 A. I don't agree with that -- with that statement
5 the way it's said.

6 Q. And in 1994 the Congress became very concerned
7 about R.J. Reynolds' and other cigarette
8 manufacturers' attempts to man -- manipulate
9 nicotine; correct?

10 MR. PLESEC: Objection.

11 A. In 1994 there were a number of attacks on the
12 industry alleging nicotine manipulation.

13 Q. I'm going to hand you a document that's been
14 previously marked as Plaintiffs' Exhibit 1151*; it
15 will be redesignated 1151-A.

16 Have you seen this document before?

17 A. I believe so.

18 Q. Nowhere in this document does Mr. Johnston, who
19 was then the president and CEO of R.J. Reynolds
20 Tobacco Company, tell the Congress that R.J. Reynolds
21 had for the past six years been doing extensive
22 research concerning the addition of nicotine
23 levulinate to its cigarette products; correct?

24 A. I don't believe --

25 MR. PLESEC: Give the witness a chance to

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1 read the document in light of your question.

2 A. I'm sorry, could you repeat the question,
3 please.

4 Q. Nowhere in this document, this statement to
5 Congress, does Mr. Johnston, who was then the
6 president and CEO of R.J. Reynolds Tobacco Company,
7 tell the Congress that R.J. Reynolds had for the past
8 six years been doing extensive research concerning
9 the addition of nicotine levulinate to its cigarette
10 products; correct?

11 MR. PLESEC: Objection.

12 A. I believe that Mr. Johnston in this -- in the
13 subcommittee hearings made it clear that we do not
14 add nicotine to commercial products. He did not
15 speak to the internal research of projects like XB
16 where we had tried to develop medium-nicotine/low-tar
17 products that addressed the Russell hypothesis for a
18 potentially safer cigarette.

19 Q. And again that research continues to this very
20 day; correct?

21 A. Which research?

22 Q. The Russell research.

23 A. There is a project which speaks to the Russell
24 hypothesis in trying to make consumer acceptable
25 products and prove consumer acceptance of

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1 medium-nicotine/low-tar products.

2 Q. And again to clarify, your answer to my previous
3 question is no, Mr. Johnston did not tell the
4 Congress that for the past six years R.J. Reynolds
5 had been investigating adding nicotine salts to its
6 cigarettes; correct?

7 MR. PLESEC: Objection.

8 A. As I recall, I don't believe Mr. Johnston did
9 speak to the internal research conducted on XB and
10 similar projects in attempts to develop
11 medium-nicotine/low-tar products.

12 Q. Nor did Mr. Johnston disclose to the United
13 States Congress that starting in 1975 R.J. Reynolds
14 add -- added ammonia to its cigarette blends in order
15 to increase smoke pH for the purpose of increasing
16 the free nicotine in the smoke, which increases the
17 physiological strength or so-called nicotine kick;
18 correct?

19 MR. PLESEC: Objection.

20 A. Mr. Johnston could not testify to that because
21 that's not true.

22 Q. Well the documents I've shown you would suggest
23 that it in fact is true.

24 MR. PLESEC: Objection.

25 Q. Isn't it also true that R.J. Reynolds suspected

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1 that Philip Morris was adding nicotine to its
2 products?

3 MR. PLESEC: Objection.

4 A. I've -- I've seen and heard some speculations to
5 that.

6 Q. Did Mr. Johnston disclose to the United States
7 Congress that R.J. Reynolds believed Philip Morris
8 was adding nicotine to its products?

9 MR. PLESEC: Objection.

10 A. I disagree with the notion that R.J. Reynolds
11 believed that. I said I've heard speculations and
12 seen speculations to that. I don't believe that R.J.
13 Reynolds knows that.

14 (Plaintiffs' Exhibit 4823 was marked
15 for identification.)

16 BY MR. O'FALLON:

17 Q. Plaintiffs' Exhibit 4823 is a document Bates
18 stamp numbered 51233 1597 through 1601. Have you
19 seen this document previously?

20 A. It looks familiar.

21 Q. Let's go to the third page of the document,
22 1599. This is under "Hypotheses." Do you see that?

23 A. It's titled "Hypotheses" at the top.

24 Q. It says "A brainstorming session conducted with
25 R&D experts from various disciplines generated the

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1 following hypotheses and discussions regarding the
2 technology and development objectives for these
3 products," and again they're talking about a review
4 of the Philip Morris products; correct?

5 MR. PLESEC: Objection.

6 A. You read that first paragraph accurately, and I
7 think they are speaking to Philip Morris products in
8 a general sense.

9 Q. Let's look at number one. It says "Philip
10 Morris could have achieved the high nicotine and
11 subsequent low 'tar'-to-nicotine ratios by blend
12 selection alone; however, this hypothesis is unlikely
13 since Philip Morris would have difficulty sustaining
14 a national brand of this type because of tobacco
15 availability issues"; correct?

16 MR. PLESEC: Objection.

17 A. That's what it says.

18 Q. "Also, the flavor and acceptability of the
19 highest nicotine product would be" diff -- "difficult
20 to achieve by blend selection alone"; correct?

21 MR. PLESEC: Objection.

22 A. That's what it says.

23 Q. Number two states that "It is more likely that
24 Philip Morris achieved these nicotine deliveries by
25 adding nicotine/flavors to the blend in a manner

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1 similar to RJR Project XGT technology"; correct?

2 MR. PLESEC: Objection.

3 A. That's what it says.

4 Q. That's the nicotine levulinate addition

5 technology; correct?

6 MR. PLESEC: Objection.

7 A. XGT included nicotine levulinate addition.

8 Q. Also referred to as nicotine salts; correct?

9 A. Well, nicotine levulinate is a nicotine salt.

10 Q. It says "This hypothesis is consistent with
11 other intelligence regarding the new Philip Morris
12 denicotinization process and heavy emphasis on
13 nicotine/flavor research"; correct?

14 MR. PLESEC: Objection.

15 A. That's what it says.

16 Q. It says "High nicotine, low 'tar'-to-nicotine
17 ratio products may be the objective of that process
18 and research or they may represent a development
19 effort to utilize the nicotine/flavors extracted
20 during low nicotine product development"; correct?

21 MR. PLESEC: Objection.

22 A. That's what it says.

23 Q. So it appears that the best minds at R.J.
24 Reynolds believed that what Philip Morris was doing
25 in these intercepted products was adding nicotine;

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1 correct?

2 MR. PLESEC: Objection.

3 A. I don't agree that that's what Reynolds or R&D
4 concluded. At the top of this page it says
5 "Hypotheses." I know that that's been a speculation
6 among a number of scientists at Reynolds.

7 Q. Well when they say it's more likely, they mean
8 it's more probable than not that R.J. Reynolds --
9 that Philip Morris added nicotine; correct?

10 MR. PLESEC: Objection.

11 A. I think that's a comparative statement comparing
12 nicotine addition via point number two versus using
13 high-nicotine tobaccos; i.e., point number one.

14 Q. In any event, RJR didn't share this information
15 with the Congress, did they?

16 MR. PLESEC: Objection.

17 A. This is simply a hypothesis, as it clearly
18 says. There have been a number of researchers at
19 Reynolds who have speculated that Philip Morris may
20 add nicotine or nicotine salts. We don't know that.
21 We've not been able to demonstrate that clearly, so
22 it is not an RJR understanding.

23 Q. Don't you think that the Congress would want to
24 know that RJR thought that Philip Morris was adding
25 nicotine to its cigarettes?

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1 MR. PLESEC: Objection.

2 A. But I'm telling you RJR doesn't think that
3 Philip Morris -- or doesn't know that Philip Morris
4 has added or does add nicotine or nicotine salts. It
5 has been a speculation based on different pieces of
6 information.

7 Q. And you people are experts in the cigarette
8 industry; correct?

9 MR. PLESEC: Objection.

10 A. I think people in research and development
11 department at R.J. Reynolds are experts in cigarettes
12 and cigarette design.

13 Q. And yet your company sat by at a hearing where
14 the Congress was clearly interested in evidence that
15 would indicate that cigarette manufacturers were
16 manipulating nicotine and said nothing?

17 MR. PLESEC: Objection.

18 A. We don't know whether or not Philip Morris has
19 added nicotine or nicotine salts or does so.

20 Q. You sat by and you said nothing?

21 MR. PLESEC: Objection. You're being
22 argumentative now.

23 A. Is that a question?

24 Q. Is that true?

25 MR. PLESEC: Objection.

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1 A. We don't know whether Philip Morris has ever
2 added nicotine. We can't demonstrate that, whether
3 they have ever added nicotine or nicotine salts or
4 whether they do add nicotine or nicotine salts. If
5 we can't demonstrate that, then we don't know that.

6 Q. Are you familiar with a line of ads that R.J.
7 Reynolds ran in the 1980s wherein the company called
8 for an open debate concerning the numerous issues
9 from -- concerning cigarettes?

10 MR. PLESEC: Objection.

11 A. In a general sense, I'm familiar with it. I
12 can't recall the specifics.

13 Q. Wouldn't you agree that it's pretty difficult
14 for the public to have an open debate on issues
15 regarding cigarette smoking when the company chooses
16 to withhold so much information?

17 MR. PLESEC: Objection.

18 A. I don't believe the company withholds
19 information that is important.

20 Q. Well the Congress of the United States believed
21 information concerning nicotine manipulation was
22 important, and your company did not disclose to the
23 Congress that you yourself had been looking for six
24 years to ways to add nicotine to cigarettes, that
25 your company had been using ammonia to increase the

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1 pH of cigarettes to increase free nicotine for at
2 that time almost 20 years and that you suspected that
3 one of your major competitors, Philip Morris, was
4 adding nicotine to its cigarettes; correct?

5 MR. PLESEC: Objection.

6 A. Again, there have been several people who have
7 speculated that Philip Morris has -- has or may add
8 nicotine or nicotine salts. We don't know that. We
9 have not added ammonia for the purpose of pH
10 manipulation, and I forget the other points of your
11 question. You had several major points there.

12 MR. O'FALLON: At this time I have no
13 further questions, but I would want to put on the
14 record that it's my understanding that Mr. Plesec
15 will deliver to us a written document that tells us
16 what cigarettes R.J. Reynolds has added ammonia to or
17 added reconstituted sheet that has ammonia in it, and
18 what we would like and what I would have went through
19 with this witness but I don't believe he knows all of
20 this information is each brand to which ammonia has
21 been added, the year it was started and -- and the
22 year it ended, if it ever ended, and if the brand
23 continues to have ammoniated tobacco, that
24 information. And you will agree to provide that?

25 MR. PLESEC: We will en -- endeavor to

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1 provide a written document that contains that
2 information. I'm not sure that that information
3 exists. We will do our best efforts to get that to
4 you as soon as possible. I'm not sure exactly what
5 the time frame will be.

6 MR. O'FALLON: Okay. In addition, I have
7 requested the document that Dr. Townsend has referred
8 to concerning the research on the pH levels of
9 Winston, I believe it was.

10 Is that correct?

11 THE WITNESS: That's what I testified to
12 yesterday.

13 MR. O'FALLON: Okay. Have you done any
14 other research on pH other than the research on
15 Winston?

16 THE WITNESS: What I referred to yesterday
17 was an investigation of historical data on pH level
18 for a number of commercial brands. I referred to
19 Winston. We have summarized pH in -- pH historical
20 data on a handful of other brands.

21 MR. O'FALLON: Okay. I would request that
22 that information be produced to us in light of the
23 fact that Dr. Townsend has referenced that
24 information both yesterday and today in his
25 testimony.

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1 MR. PLESEC: We will endeavor to provide
2 that information consistent with the orders governing
3 this case.

4 MR. O'FALLON: I need a commitment that you
5 will in fact provide the information; otherwise, we
6 will make a motion.

7 MR. PLESEC: Oh, I -- I will provide that
8 consistent with the orders governing the -- this
9 case.

10 MR. O'FALLON: Well, does that mean you
11 will provide it?

12 MR. PLESEC: I will -- that's exactly what
13 I said.

14 MR. O'FALLON: With that, I have no further
15 questions.

16 THE REPORTER: Off the record, please.

17 (Deposition recessed at 9:29 o'clock
18 a.m.)

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25

1 C E R T I F I C A T E

2 I, William C. LaBorde, hereby certify that
3 I am qualified as a verbatim shorthand reporter; that
4 I took in stenographic shorthand the testimony of
5 DAVID TOWNSEND at the time and place aforesaid; and
6 that the foregoing transcript consisting of pages 489
7 through 556, Volume V, is a true and correct, full
8 and complete transcription of said shorthand notes,
9 to the best of my ability.

10 Dated at Las Vegas, Nevada, this 3rd day of
11 October 1997.

12

13

14

15 WILLIAM C. LaBORDE

16 Registered Professional Reporter

17 Notary Public

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1 C E R T I F I C A T E

2 I, DAVID TOWNSEND, the deponent, hereby
3 certify that I have read the foregoing transcript
4 consisting of pages 489 through 556, Volume V, and
5 that said transcript is a true and correct, full and
6 complete transcription of my deposition, except per
7 the attached corrections, if any.

8

9 (Please check one.)

10

11 ____ Yes, changes were made per the attached
12 (no.) ____ pages.

13

14 ____ No changes were made.

15

16

17 DAVID TOWNSEND

18 Deponent

19

20 Sworn and subscribed to before me this day
21 of 199__.

22

23

24 Notary Public

25 My commission expires: (WCL)

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